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ABSTRACT

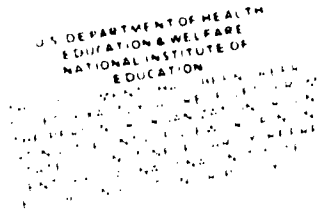
This monograph summarizes the results of two mini-conference discussions on the general topic, evaluation of career education. It addresses three major points: (1) Problems involved in evaluation of career education, i.e., instrumentation, expectation, concept implementation, and perceived personal benefit, (2) examples of evaluation approaches currently utilized in career education by 12 professionals with direct responsibility for evaluation, and (3) learner outcomes (which are stated as goals and include consultant recommendations for each goal) appropriate for use in evaluating career education. Appendices list names and addresses of participants in the two mini-conferences. (SH)

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MONOGRAPHS ON CAREER
EDUCATION

PERSPECTIVES ON THE PROBLEM OF
EVALUATION IN CAREER EDUCATION



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PREFACE

During 1975-76, the Office of Career Education (OCE) conducted, through provisions of a grant made to The Center for Vocational Education, The Ohio State University, a series of 27 "mini-conferences" covering a wide range of career education topics. Two of these "mini-conferences", one involving expert practitioners and the other involving general consultants, were devoted to the general topic "Evaluation of Career Education". It is the results of deliberations from these two conferences that are summarized here. The general notes, on which this monograph is based, are contained in the technical report by Dr. Richard Miguel, Project Director for the Office of Education (OE) grant concerned with the 1975-76 "mini-conferences".

Many examples of evaluation practices and results are contained in the files of OE's Office of Career Education. These include unsolicited examples from current local career education projects as well as formal evaluations for each of the 1975-76 OCE funded career education projects. Such documents are available for study by those visiting the Office of Career Education, but are not included as part of this monograph. Instead, an attempt has been made here to limit discussion to topics discussed during these two "mini-conferences". It is hoped that such a discussion will be helpful to those concerned with the problem of evaluation of career education.

The list of participants in these two "mini-conferences" is included in the Appendix. While each listed participant made significant contributions, none can or should be held accountable for the specific content of this monograph. The examples of specific evaluation practices attributed to particular participants can, in each instance, be substantially expanded by those who wish to make contact with such participants.

PERSPECTIVES ON THE PROBLEM OF EVALUATION IN CAREER EDUCATION

INTRODUCTION

The age of accountability has definitely come to American education. In general, the accountability emphasis has called on all parts of American education to answer two basic questions: (a) What have you done? (this is the question of *process*) and (b) What benefits have resulted from your actions? (this is the question of *product*). Each of the long-established programs and parts of our educational system are currently faced with providing definitive answers to these two questions. The general thrust has been one aimed at moving away from the trend of making education cost more and more money, and toward a direction of making education more cost-effective. As a general trend, it is one that should be welcomed, rather than resisted, by all educators.

Ideally, of course, the question of *how good* a particular educational practice is will be asked only after the question of *what it is* has been clearly answered. The impact of the accountability issue in education, at the present time, has not permitted this ideal situation to prevail. This is especially true with any proposals for *new* approaches to education--such as career education. To the extent that a suggested new proposal calls for basic *change* in any part of education, that change is certain to meet with a certain amount of resistance on the part of those being asked to change. When, as with career education, change is called for in the *entire system* of American education, the degree of resistance to change becomes very great indeed. One of the easiest, and currently most popular, ways of expressing resistance to change is to note that the proposed new process has not, as yet, been subjected to sufficiently rigorous evaluation. The age of accountability has increased the use of this strategy for resisting change.

If carried to an extreme, the general call for accountability can effectively hinder the introduction of any new educational concept. That is, the expected

benefits from education, almost without exception, are stated in long-term goals as well as in short-term goals. The long-term goals, typically, are stated in terms that reflect expected behaviors of pupils once they have become adults and left the formal system of education. Such goals, therefore, are ones that defy evaluation prior to the time a generation of pupils has passed through the educational system and assumed adult roles. When evidence of effectiveness in attaining such goals are demanded prior to the time a new practice is permitted to be tried, there is no way that such demands can be met. In the case of career education, which assumes efforts beginning in the early elementary school years and continuing through the entire system of formal education, the attainment of long-run goals must necessarily be delayed for a number of years.

This makes it doubly important that careful attention be paid to both process goals and to short-term product goals of career education. This need has been recognized by career education advocates from the beginning. Here, an attempt will be made to summarize thoughts and recommendations of a number of career education evaluation experts related to this need. At present, both our knowledge and our practices remain too incomplete as to result in any simple, "cookbook" solutions for practitioners. As a result, this monograph has contented itself with addressing three major topics: (a) Problems involved in evaluation of career education; (b) Examples of evaluation approaches currently utilized in career education; and (c) Learner outcomes appropriate for use in evaluating career education.

PROBLEMS IN EVALUATION OF CAREER EDUCATION

It is easier to state, than to solve, problems in almost any area of endeavor. This general maxim was demonstrated repeatedly in the two "mini-conferences" forming the basis for this monograph. A second maxim can be stated in the following way: *It is impossible to solve a problem unless its dimensions can be clearly defined.* A considerably amount of "mini-conference" time was devoted to discussion centered around this maxim. Results of those discussions are reported in this section.

THE PROBLEM OF INSTRUMENTATION

Perhaps the most frequently mentioned problem raised by participants was that of appropriate instrumentation for evaluation of career education. Clear consensus appeared to be present that such instrumentation does not, at this time, exist in a form that adequately covers all of the problems involved in evaluating career education. The prime difficulty appears to stem from the nature of the career education concept.

For example, career education, from the outset, has been pictured as an effort aimed at changing both the attitudes and the actions of educators, members of the business-labor-industry community, and members of the home and family structure. It is clear that *people change* LEADING TO *program change* is what we seek. Before we can expect program changes to occur to a degree that makes them susceptible to evaluation, we must first assure ourselves that *people change*--i.e., changes in the *attitudes* of people--has occurred.

The kinds of attitude change career education seeks cover a number of areas. Part of those attitudes have to do with recognizing (and believing) basic facts concerning changing relationships between education and work. A second part has to do with attitudes toward involving the broader community in the teaching/learning process. A third part relates to attitudes toward the goal of education, as preparation for work, and the importance of this goal among the basic goals of American education. A fourth part relates to the perceived importance of bringing educational goals into the teaching/learning process as a source of educational motivation--and the importance of motivation itself in the teaching/learning process.

To date, very few instruments have been developed for assessing the kinds of attitudinal changes called for by career education. Those that have been developed have often ignored the basic problem of validating such attitudinal measures. The difficulty stems, in large part, from the fact that the kinds of attitudes being espoused by career education are those which, in a societal sense, are considered desirable by large numbers of persons but, for a variety of reasons, are internalized by relatively

few. In part, the difficulty stems from the fact that, even when the attitude is clearly held, its implications for changes in *action* on the part of those who hold it often remain unclear. Without, in any sense, attempting to construct an attitude scale here, the following examples of attitudes career education seeks to see internalized, as part of the *people change* process, include the following:

1. The full range of both educational and occupational opportunities must be made available for consideration by both minority persons and by women, as well as by white males.
2. It is important for today's youth to understand and to act on the concept of lifelong learning.
3. Adaptability skills--the ability to change with change--are needed by today's youth fully as much as are entry level skills.
4. "Work" is a humanistic word representing the basic human need of all human beings to do--to accomplish--to achieve. As such, it can be easily distinguished from the word "labor".
5. The correlation between number of years spent in schooling and economic rewards, while still positive, is declining.
6. The changing nature of the home and family structure in America makes it imperative that educators accept new kinds of responsibilities in imparting the concept of work in the home and family structure to youth.
7. The goal of education, as preparation for work, must extend beyond simply the world of paid employment and include both the concept of volunteerism and the productive use of leisure time.
8. General education and the liberal arts are as important as are vocational education and professional specialization curricula in meeting the goal of education, as preparation for work, in today's society.

9. Students can and do learn in more ways than from books, in more places than in classrooms, and from more people than only certified teachers.

10. The "world of schooling" and the "world of paid employment" must be meshed in ways that will help youth make an effective transition from one of these "worlds" to the other.

11. The most basic vocational skills are the basic academic skills.

12. Work values, like other parts of one's personal value system, are highly influenced by events taking place during the elementary school years.

13. Since there are severe limits to what one can learn about work simply through reading, work experience should become a general educational methodology rather than a special kind of educational program.

14. Educational reform cannot be accomplished through program "add ons", but, rather, through changes infused into the existing structure.

15. To help students understand the career implications of subject matter can be and is a powerful source of educational motivation for many students.

16. Any person who deserves to be called a "teacher", as opposed to an "instructor", must be concerned about motivating students to learn subject matter in addition to being concerned about the subject matter to be imparted.

The few illustrative examples presented above should make clear some of the major problems concerned with assessing attitude change in the evaluation of career education. First, the kinds of attitudes illustrated here are ones that many of today's educators would tend to mark "true" if presented in the form of an attitudinal measure. Second, because an item may be marked true in no way necessarily means that the person marking it

fully understands the attitudinal statement itself. (As a matter of fact, the acquisition of such real understandings is one of career education's major challenges at the present time.) Third, even when a given attitude is fully understood, there is no necessary assurance that it will become an internalized action commitment on the part of the person involved. Finally, even when such internal commitment to action is present, the person often can see the constraints impeding action more clearly than he/she can see the routes to effective implementation actions. For all of these reasons, the valid assessment of attitudinal changes, so essential to actions educators may choose to take in implementing the career education concept, remains a critical problem facing those interested in the evaluation of career education.

When the focus of attention is switched from a concern about attitude change among educators to attitudinal and behavioral changes among students, the instrumentation problem becomes even more severe. Career education advocates have, for example, placed great stress on the importance of helping students acquire a personally meaningful set of work values. At this point in time, there is far from universal agreement with respect to the range and specific definitions appropriate for use in describing, let alone measuring, what we mean by "work values". Even when one is satisfied with a given description of what is regarded as a complete set of work values, there is obviously no way of saying one student's work values are "better" than another's. Thus, evaluation attempts in this area must be limited to trying to answer such questions as: (a) To what extent is the student aware of the full range of existing work values?; (b) To what degree has the student decided on those work values most important to him/her?; and (c) What behaviors has the student demonstrated illustrating his/her attempts to implement work values? To answer any of these questions demands the presence of a measure of work values that possesses adequate reliability and validity. It appears that much remains to be done before we can ascribe such qualities to currently existing measures of work values.

Similar problems exist when such topics as "career decision-making skills", "employability skills", and

"good work habits" are raised. Efforts to develop and validate good measures in areas such as these, while currently the object of considerable attention, have yet to produce anything approaching universally acceptable products. Even when the topic is listed as "basic academic skills", there is wide diversity of opinion regarding what would be considered acceptable measures for use in determining the extent to which students have acquired such skills. Some of the current attempts to solve these kinds of instrumentation problems will be discussed in the last section of this monograph when the viability of OE's learner outcomes for career education are considered. Suffice it to say here that problems do exist and they are serious in nature.

EXPECTATIONS OF CAREER EDUCATION: REFORM VS. STUDENT BENEFITS

Great confusion continues to exist with respect to the goals and expectations of the career education effort. A prime source of confusion is clearly seen when one considers the question of educational reform vs. the question of student benefits to be derived (hopefully) as a result of educational reform. In brief, it is the classical problem of evaluation that demands one (a) specify clearly the treatment to be applied and (b) verify the extent to which the treatment has been applied prior to (c) assessing the benefits that result from application of the treatment. Too many current attempts to evaluate career education have concentrated their primary attention on Step (c) while almost completely ignoring Steps (a) and (b). While the reasons for this are readily understandable, they are certainly not acceptable.

Career education has been pictured as an attempt to *reform* the entire system of American education in ways that will bring a more *proper* (note--not an *exclusive*) emphasis to education, as preparation for work, *among* the several basic goals of education. It is assumed that, if this reform can be accomplished, both student and societal benefits will result. Prior to testing that assumption, it is obviously first essential to specify the nature of the reform being sought and then

to assess the extent to which it has taken place. The problem is further complicated when one realizes that we are talking simultaneously about using a different basic methodological approach to education (education *by means of careers*) and emphasizing specific learner outcomes related to career development (education *in careers*).

Insofar as career education represents an effort aimed at reform of the entire *system* of formal education, then it is obvious that evaluating improvements in education--using criteria associated with any of its *basic* goals--must be considered one means of evaluating the impact of career education. This is a prime reason why the criterion of "increases in basic academic skills" is listed as the first of the career education "learner outcomes" in the OE policy paper, *An Introduction To Career Education*. In order to specify the career education "treatment", it is essential that we be able to describe the basic nature of the kinds of educational reform being sought in ways that are susceptible to measurement. Since the career education effort is pictured as covering the entire *system* of education (from the elementary school through the graduate college) and since the call for reform extends to all of the existing kinds of educational programs and specialties (e.g., teachers, counselors, administrators, etc.), it is obvious that specification of specific kinds of changes being sought, in terms suitable for clear evaluations, will entail development of a very sizeable matrix of process variables. The development of such a matrix--and obtaining consensus on its components--is a task that, as yet, has not been completed. In spite of this, the major, generic kinds of changes being sought are ones on which wide, general agreement now appears to be present. Such generic kinds of changes include:

1. A change *away* from strict dependence on didactic instruction and *towards* a more activity-oriented, experiential approach to learning.
2. A change *away* from a single approach to instruction and *toward* the use of a variety of methods for use by both teachers and students in the teaching/learning process.

3. A change *away* from depending on the teacher as the sole instructional resource available for helping students learn and *toward* the use of a wide variety of community resource persons in the classroom.
4. A change *away* from limiting instruction to formal classroom settings and *toward* greater use of the community as a learning resource center.
5. A change *away* from emphasizing to students how they have failed and *toward* emphasizing to students how they have succeeded.
6. A change *away* from worshipping time as a criterion for certifying educational accomplishment and *toward* the use of performance evaluation.
7. A change *away* from a great dependence on commercially prepared materials as instructional aids and *toward* the use of "homemade" materials developed by teachers, students, and community resource persons.
8. A change *away* from emphasizing only the acquisition of specific entry-level occupational skills and *toward* adding an emphasis on helping students acquire adaptability skills required to change with occupational change.
9. A change *away* from emphasizing the goal of education, as preparation for work, only in terms of the occupational society and *toward* adding an emphasis on education for productive use of leisure time.
10. A change *away* from viewing work experience as a kind of educational program and *toward* using work experience as a general educational methodology.
11. A change *away* from viewing the prime purpose of education as preparation for still more education and *toward* emphasizing the need to show students how what they learn can be used outside the structure of formal education.

12. A change *away* from relegating the goal of education, as preparation for work, to only a portion of educational programs and *toward* finding ways of making this a meaningful goal of all who teach and all who learn.

13. A change *away* from strict dependence on professional counselors for carrying out the career guidance function and *toward* the addition of teachers, parents, and community resource persons in this effort.

In all of these ways, an educational institution that professes to have implemented a career education effort should be able to demonstrate the presence of activities in a form susceptible to measurement--and so to evaluation. It will be noted that the first seven of the thirteen changes listed above could be applicable to those concerned with *any* of the basic goals of education, while the last six are much more specifically related to only one goal--namely, education as preparation for work. This is in keeping with career education's basic tenet that the reforms being sought should aid, rather than detract from, efforts to meet all of the basic goals of American education. Career education asks that these first seven changes be carried out by means of a career emphasis. If such an emphasis can result in these kinds of changes, career education advocates have claimed that all basic goals of American education can be better met. This, too, represents a claim that should be susceptible to evaluation.

When one moves from an "education by means of careers" emphasis to an "education in careers" emphasis, then product evaluation--stated in terms of learner outcomes--becomes more appropriate for use than the process oriented approach to evaluation discussed here. A discussion of such student learner outcomes constitutes the last part of this monograph. Here, the point to be emphasized is that process evaluation, oriented around the basic kinds of changes being sought in the system of education, can be viewed as properly preceding product evaluation as measured by direct learner outcomes. In the long run, both are important and necessary.

THE PROBLEM OF EVALUATING IMPLEMENTATION OF A CONCEPT

Career education has consistently sought to avoid becoming yet another "program" to be added to all of those now existing in American education. Instead, it has sought to be regarded as a concept to be implemented throughout all of the various kinds of existing programs--and thus truly being a vehicle for reform of the entire educational *system*. Instead of asking for addition of a new course called "career education", it has asked for a "careers" emphasis to be infused in all existing courses. Instead of asking for a new "career education specialist" to be added at the building level, it has asked for all existing educators to embrace and implement the goal of education as preparation for work as part of their responsibilities to students. Thus, when one looks for a person, a course, or a special kind of building to use as a starting point in the evaluation of career education, none is found. Instead, career education's success, or lack of success, is to be found in looking at all educators, all courses, and all buildings in the system. Even beyond the formal education system itself, career education has pictured itself as a collaborative that also involves both the business-labor-industry community and the home/family structure. These segments of society, too, must become involved when one seeks to answer the questions of accountability in implementation of the career education concept.

Just as the career education effort hopefully makes positive contributions to all other basic goals of education, so, too, do efforts aimed at emphasizing such other goals hold positive potential for contributing to the effectiveness of the career education effort. It is a two-edged sword and cuts both ways. For example, educators interested in promoting the basic goal of good citizenship may seek, as a vehicle for doing so, greater community interaction with the formal system of education. To the extent they are successful, the potential for increasing the efficacy of the career education effort is enhanced. Another segment of educators may express, as a primary interest, a concern for reduction of occupational sex role stereotyping in educational

materials and in career guidance services. This effort, too, holds positive potential for helping attain the objectives of career education. Within the broader community, many kinds of activities are now operating--and did for several years prior to the time the words "career education" were invented--aimed at helping youth in the career awareness, career exploration, and career decision-making processes. These include such organizations as Junior Achievement, Explorer Scouts, Girl Scouts of the U.S.A., the Chamber of Commerce, the National Alliance of Businessmen, the National Council of Business and Professional Women's Clubs, the National Council of Churches, and such major industrial corporations as the American Telephone and Telegraph Company, the General Electric Company, General Motors Corporation, and the American Cyanamid Company. There is no way in which one could pretend that activities of such groups do not contribute--or hold potential for contributing--to the success of the career education effort.

Evaluation of the efficacy of career education, in a given community, must, therefore, represent a combination of two major kinds of process evaluation along with product evaluation based on some set of learner outcomes. One kind of process evaluation is required for each of the many educational and community segments called for in the collaborative process known as career education. The second kind of process evaluation must center around ways in which the various segments are brought together and interact together in ways that hold positive potential for contributing to desired learner outcomes for career education.

It is relatively easy to determine the extent to which the various segments--and people involved in each segment--are engaging in activities that appear to hold potential for the positive implementation of career education. It is, at the same time, very difficult indeed to look at positive results--in terms of learner outcomes--and specify which segment of education and/or of the broader community--made that outcome successful or unsuccessful. If career education continues to be viewed as a concept which, when applied in action, can lead to both educational reform and to a series of direct student benefits, we will continue to be in a position where the total success of the effort can be

evaluated, but great difficulty will be encountered when either praise or blame is to be assigned to a particular segment. Evaluation would be much easier if career education were a program, but it is not.

THE PROBLEM OF "WHAT'S IN IT FOR ME?"

It would be ideal if everyone's personal values were so altruistic in nature that simply seeing positive student outcomes was a sufficient source of motivation for a particular person to continue his/her efforts. Unfortunately, we do not live in an "ideal world", but rather in a world of human beings whose motivations, while sometimes based on altruism, are almost always also based on some kind of self-serving interest. Of all the "actors" in career education, it may well be true that the only ones who will find student benefits alone a sufficient reason for continuing their enthusiastic involvement in the effort are parents. For most other persons, career education efforts, no matter how important or desirable they may appear to be, are not seen as the primary reason why that person is employed. That is, the teacher's main job is imparting substantive content to students; the counselor's main job is improving student self-understanding and decision-making; the administrator's main job is administration; and the businessperson's main job is the particular business or occupation in which he/she is engaged. Yet, career education asks each of these persons to play a key and crucial role in the implementation of career education. For each to volunteer to play such a role in an enthusiastic manner, and on a continuing basis, demands that they see some benefits accruing to themselves as well as to students. Such perceived benefits become, in effect, another set of criteria by which each evaluates the efficacy of career education—and so their personal commitment to the concept.

Classroom teachers, at the K-12 level, have pictured such benefits to themselves as including: (a) a way of motivating students to learn subject matter; (b) a way for teachers, as well as students, to learn new and valuable things about occupations and about their

community; (c) a way of finding and utilizing community resources so that the teacher does not have to depend completely on his/her knowledge in order to present information to students; (d) a way of helping teachers better understand their students; and (e) a way of introducing sufficient variety into the teaching/learning process so that teaching becomes more interesting for the teacher.

Counselors have seen career education as a vehicle for: (a) helping to attain the goals of career guidance (which the counselor recognizes he/she cannot do alone); (b) gaining greater acceptance for counselors among teachers and community persons; and (c) gaining more community support for the career development process.

Members of the business-labor-industry community have viewed career education as holding positive potential for: (a) gaining greater understanding and acceptance of the American economic system; (b) producing students who, when they leave the educational system, are better prepared to enter and become successful in the world of paid employment; and (c) restoring a positive attitude toward work on the part of both youth and adults in the community.

School administrators and school board members have viewed career education as an effort which, if successful, will: (a) serve as a vehicle for improving basic academic skills of students; (b) provide a means of making education more cost-effective through greater utilization of community resources; and (c) gain greater community understanding and support for education, thus making it easier to gain financial support for education.

Vocational educators have viewed career education as a means for gaining greater community understanding and support for their efforts as well as a means of attracting more able students. Liberal arts educators, on the other hand, have viewed career education as a rationale for justifying the key role the liberal arts play in providing students with the adaptability skills needed to change with changes in the broader society as well as a means of helping prepare students for productive use of leisure time.

It is neither proper nor feasible to build formal evaluations of the career education effort around the wide variety of hopes and expectations listed above.

Yet, in an informal way, there seems little doubt but that particular individuals will be making their own informal evaluations of career education in accordance with some of these expectations. Those persons interested in and concerned about the importance of evaluating career education cannot ignore such expectations--even though they will seldom find opportunity to include them in formal evaluation designs. It may well be that, because career education seeks to be infused into all programs rather than added on as a new, separate program, because it does not seek new kinds of specialists at the building level, and because it does not ask for large amounts of dollars, the long-run future of career education may, operationally, depend relatively more on these kinds of personalized, informal criteria than the more formal evaluation efforts based strictly on either process or product.

EXAMPLES OF APPROACHES TO EVALUATION IN CAREER EDUCATION

The first of the two "mini-conferences" on "Evaluation of Career Education" contained invited participants, each of whom had direct responsibility for evaluation of career education in a particular community or in a particular State. In addition to providing valuable consultative assistance with reference to the kinds of problems outlined in the preceding section, each also volunteered a short description of their current efforts. This section is devoted to a summary of those descriptions. Interested readers can obtain much more complete descriptions by contacting the individuals mentioned here.

DR. FRANK RAPLEY

The Jefferson County, Kentucky, career education project, funded during FY-1975 as a demonstration project aimed at providing career education to minority and low-income youth, operates at the K-12 level in Louisville, Kentucky, and in the rest of the county. Dr. Rapley is the person with prime responsibility for

designing and carrying out evaluation of this career education effort.

While concerned with both process and product evaluation, initial attention was centered around a *process* approach to evaluation. Six major objectives of this project were first specified. Each objective was then sub-divided into a number of *mission* statements, and each mission statement further sub-divided into a number of task analysis statements. For each task analysis statement, persons responsible for performing the task were identified and a time line constructed indicating when that particular task was due to be completed. (The basic model was one they had used previously in a drug education project.)

Each quarter, progress reports are prepared consisting of: (a) self reports of persons charged with performing each task; and (b) interview data collected from at least a sample of intended recipients of the activity. In addition, quarterly reports, known as "Documentation Reports" are prepared, in computerized form, consisting of three parts: (a) Action Plan Reports; (b) Accomplishment Reports; and (c) Change Reports. In this way, data are always available with respect to what each person intends to do, what he/she actually did, and a written rationale for changes in plans that became necessary as implementation activities were initiated. Dr. Rapley reported that the "change reports" were especially valuable in helping in further conceptualization of career education goals and objectives.

In this project, a very great deal of attention is being paid to teacher activities in the classroom related to career education. They are in the process of categorizing these activities in accordance with the Louisville Career Education Model. To be able to accurately categorize such teacher activities in a reliable manner is one of the biggest problems to be solved in this evaluation effort. A considerable degree of attention is being devoted, in the total process evaluation effort, to (a) documenting the kind and degree of in-service education given teachers in career education; (b) verifying that what was learned through in-service was *actually* applied in the classroom; and (c) arranging what takes place in the

teaching/learning process in some kind of conceptual hierarchy. The Jefferson County career education project is one that operates conceptually within the framework of the entire teaching/learning process--not as a set of isolated activities to be added to other things teachers do. It is an approach to process evaluation that appears to hold great promise.

At the time of the "mini-conference" Dr. Rapley attended, major attention was being devoted to process evaluation. It should be noted, however, that in the design for this project, both a Director of Process Evaluation and a Director of Product Evaluation were appointed. By the time this monograph appears in print, efforts of the Director of Product Evaluation should also be available.

DR. GARY JARMER

Dr. Jarmer has devoted considerable time and effort to identifying, using, and building new kinds of instruments required for evaluation of career education. He provided seminar participants with short descriptions of three such instruments.

The first, developed by Glen Rask and Arvin Bloom in Colorado, is called the "Teacher/Administrator Career Education Needs Assessment". Its basic purpose is to measure the extent to which teachers and administrators understand basic career education concepts. This kind of assessment is obviously a prerequisite to the effective use of such concepts in the classroom. As such, it is one preliminary way of verifying that a career education "treatment" can be applied.

A second instrument, also developed by Rask and Bloom, is called the "Student Assessment Instrument". (Its formal title may differ from this, but this was the way it was reported in the "mini-conference".) This is an instrument used for *product evaluation* in career education through direct administration to students. It measures such things as: (a) attitudes toward work; (b) self awareness; (c) knowledge of occupations; and (d) future plans. Dr. Jarmer reported this, too, to be an instrument he has found to be of value to him.

A third measure, developed by Dr. Jarmer, is designed to measure relationships between parent understanding and involvement in career education. Dr. Jarmer has collected both reliability and validity data on this parent assessment instrument.

It is obvious that, in contrast to the Jefferson County, Kentucky effort, Dr. Jarmer, in Kansas, is concentrating relatively more on assessing student career development as opposed to the total teaching/learning process. These first two examples provide an interesting contrast of current evaluation efforts and concerns in career education.

DR. ELLEN MEISTER

In Madison, Wisconsin, Dr. Meister is responsible for large parts of the accountability question for the public schools. One major part of her efforts has been devoted to answering the question "What impact on teacher behavior in the classroom results from funds expended for in-service staff development?". Since, in Madison, somewhere between \$20,000 to \$70,000 per year has been expended for staff development activities in each of the last five years, this becomes a very important question--especially in times of financial crisis. She has developed, for this purpose, an inventory of the amount of in-service given teachers in career education, and collected self reports from teachers specifying those career education skills the teachers believe they have acquired as a result of this training.

Dr. Meister has also developed a number of instruments and materials for use in helping career education practitioners make evaluative judgments. Already developed is a 70-item instrument, involving eight categories, for use in evaluating career education materials. At present, she is developing an evaluation kit for use by teachers in evaluating "homemade" career education materials and evaluation instruments. Further, she reported herself to be currently working on trying to collect instruments appropriate for use in measuring the impact of involvement of the business-labor-industry community on the effectiveness of the career education efforts in Madison.

She has developed and is using a rather unique approach to evaluating the quality of career education activities in the classroom. This procedure involves taking non-involved, non-trained teachers into classrooms where teachers who have received in-service staff development in career education are teaching. The non-involved, non-trained teachers are asked to identify career education goals and evidences of success in reaching those goals, after spending from half a day to one and one-half observing in classrooms. The biggest practical problem to be solved here is to know *when* to send the "non-involved" teachers into a given classroom because, of course, the "involved" teachers are not using career education activities every hour of the day--nor even every day.

HOWARD HEITZEG

Mr. Heitzeg has played a key role in evaluation of career education efforts in Pontiac, Michigan. In Pontiac, a major attempt has been made to train teachers, counselors, and others in career education methods and procedures using as a basis Robert Karkhuff's approach to interpersonal skills development.

In Pontiac, considerable use is made of simulation activities in carrying out evaluation of career education. As one example, using the Karkhuff approach, students were encouraged to develop action plans for getting a job. They were given both a "people" job and a "thing" job for which to apply and told they would be paid \$5 if, after the job interview, they were offered the job. Using professional job interviewers, interviews were held with 20 students--ten of whom had been exposed to career education and ten who had not. The interviewers, of course, were not told which were the "career ed" students and which were not. Instead, they were told to hire only ten of the 20 students who applied. Of the ten hired, nine had come from the "career ed" group of students. This was presented as behavioral evidence that career education did, indeed, assist students in the acquisition of "job-getting" skills.

Mr. Heitzeg is convinced that many areas of career education can be effectively evaluated by use of simulation devices with random samples of "career ed" versus "non-career ed" students. He was currently working on such a simulation approach designed to test the degree to which career education efforts have improved student career decision-making skills. The simulation approach to evaluation of career education, as it is being developed in Pontiac, Michigan, is one that appears to hold high probabilities for effective replication elsewhere in the country--whether or not one chooses to use the Karkhuff approach.

JOE GASTRIGHT

In Cincinnati, the Ohio Model For Career Education has been introduced. This model contains three specified student outcomes for career education at each grade level. After teachers have received in-service staff development and have been given curriculum guides for use in applying this model, Mr. Gastright and his staff are charged with going into classrooms and collecting data that will answer the question "What percent of teachers are engaging in activities aimed at the three student outcomes?".

In order to carry out some form of product evaluation, the evaluation staff of the Cincinnati Public Schools asked teachers at each grade level to construct five items that would reflect what students should know as a result of teacher actions in career education. While unable to obtain suitable items in sufficient quantity at the elementary school level, they were able to construct a 60-item instrument for use at the junior high school level. Unfortunately, after the total instrument was constructed, they could not find teachers agreeing that the items, in fact, represented what the teachers were trying to do. It was thus not surprising when, after the instrument had been administered to "career ed" and to "non-career ed" students, no statistically significant differences in test scores were found.

One significant benefit of this approach is that it allowed a determination to be made regarding what teachers, in operational terms, thought they were

supposed to be doing in career education. They discovered that, by and large, teachers appeared to think the task was primarily one of teaching the content of occupations (e.g., "What does a cartographer do?" was a test item made by one teacher), rather than broader, lifestyle considerations related to careers. (Note: Of course, this could have been due to the simple fact that such items are easier to construct than are those involving broader dimensions of career education.)

One very significant career education evaluation activity now underway in Cincinnati involves the testing and validation of a ten-point rating scale for use by elementary school pupils which they constructed around the theme "Why do people work?". This scale was based on three broad areas of work values: (a) societal reasons; (b) personal satisfaction; and (c) economic need. They have found, in administering this instrument to elementary school pupils, large differences in student responses. In general, responses went from a primary emphasis on "economic need" in the First Grade, to an emphasis on "personal satisfaction" in the Sixth Grade. This instrument, and its conceptual base, deserve careful study by those concerned with evaluation of career education.

DR. ELVIS ARTERBURY

As Director of the Partners in Career Education Project in Arlington, Texas, Dr. Arterbury has launched and is operating a major effort to develop and validate instruments for administration to students related to each of the nine "learner outcomes" found in the OE policy paper, *An Introduction To Career Education*. This project began by asking a wide range of individuals representing both educators and the general public, the question "What should the public schools be doing?". After a great deal of refinement, the responses were reduced to a set of 177 basic learner outcomes for career education. Working with Westinghouse Learning Corporation, they have now developed assessment measures for 80 of these 177 basic learner outcomes. In doing so, they have found it necessary to construct three items for each learner outcome, and to make each item one with a four-choice response format.

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A total of 273 test items were developed for use in the Texas Career Education Measurement System (CEMS). These items were organized into 16 instruments for the measurement of 63 of the 80 basic learner outcomes and then packaged into the measurement system. Further, they have now developed one survey test built on items taken from the 16 category tests which covers nine broad categories. This one 45-item survey test is currently being used throughout Texas for purposes of conducting a Statewide needs assessment for career education.

It seems safe to say that the Partners in Career Education Project has done more to develop items and measures for use with each of the nine basic learner outcomes represented in *An Introduction To Career Education* than any other single project in the United States. The primary approach being used is that of product evaluation. It is a system deserving of very careful study by all interested in the evaluation of career education.

DR. CARROLL CURTIS

Dr. Curtis reported that, in Pennsylvania, the creation of Career Resource Centers (for use by high school students from a given geographic area in career exploration and career decision-making) has helped greatly in encouraging local school systems to begin the implementation of career education. Students using such centers are asked to rate the center on helpfulness to the student. These student ratings have, almost without exception, been consistently high. This has apparently encouraged many areas in Pennsylvania to construct such centers.

Dr. Curtis also pointed out three current operational restrictions that are currently hindering comprehensive career education evaluation efforts in Pennsylvania. First, he pointed out the increased legal restrictions now existing with reference to any form of attitudinal testing. Second, he indicated that evaluation of career education has been hindered by the use of goals that are too global in nature--(e.g., the use of "Job Placement" as a criterion for evaluating career education is of doubtful validity in view of the many factors affecting

success in this area)--and pleaded for use of much more specific evaluative criteria. Finally, he questioned, from a conceptual point of view, use of such criteria as "career stability" in the evaluation of career education, in light of the fact that, for many students, to change occupations is "good", not "bad". (Note: While these appear to be problems in Pennsylvania, it should be noted that the two examples of criterion problems mentioned by Dr. Curtis are not included among the nine learner outcomes listed in the official OE policy paper on Career Education.)

DR. JANET SHELVER

Since 1971, Dr. Shelver has been operating a program called "Career Awareness For Secondary and Elementary Students" (CASES) in Sioux Falls, South Dakota. This is a program built on a joint concern for self awareness and occupational awareness. To measure self awareness, at the K-3 level, she has used the "Pictorial Self Concept Scale"--a 50-card deck of pictures which pupils are asked to put in three stacks: (a) "like me"; (b) "sometimes like me"; and (c) "not like me". At the Grades 4-6 level, she uses Coopersmith's "Self Esteem Inventory" to measure self awareness.

To measure occupational awareness, Dr. Shelver uses 14 slides of workers in various occupations, each representing one of the 15 OE clusters. (Marine Science was eliminated because no one in Sioux Falls is employed in that cluster.) Each slide depicted a worker in some occupation in Sioux Falls. As students are shown the 14 slides, they are asked to answer the following questions: (a) "Who am I?"; (b) "What do I do?"; and (c) "Would I like this job?".

Using these instruments, Dr. Shelver found that her career education efforts did serve to reduce occupational sex stereotyping among female (but not among male) pupils at the K-3 level. Further, she found that the CASES career education approach did improve self concept of pupils at the Grades 4-6 level. While these student outcomes are, to be sure, only a very narrow segment of what would be considered to be a comprehensive career education effort, the positive results Dr. Shelver obtained are most encouraging.

DR. ARTHUR BERRY

In the State of Maine, two major efforts have been initiated aimed at initial evaluation of career education efforts. One of these, involving the use of pre-tests and post-tests of occupational information and terminology with teachers and counselors, was conducted as part of a National Alliance of Businessmen Career Guidance Institute. Results were very positive in terms of increases in teacher knowledge and perceptions of the occupational world.

The second major evaluation project Dr. Berry reported on is being conducted for Project REVAMP--a Part D, VEA career education project in South Portland, Maine. Project REVAMP operates under an assumption that career education is a concept to be infused into existing instructional programs, not a new kind of program to be added to existing ones. Accordingly, evaluation procedures are designed to measure the extent to which currently employed teachers, counselors, and curriculum resource persons incorporated career education activities into their regular activities during the school year. To accomplish this objective, the evaluation team (one from curriculum, one from guidance, and one from elementary education) meets with local career education persons at the beginning of each year and helps them determine specific goals for the year. At the end of the year, they meet again to determine the extent to which the goals were met.

A significant part of this evaluation effort is concerned with process evaluation. For example, evaluation reports include statements such as: (a) "150 pieces of career materials were distributed to pupils"; (b) "220 teachers received in-service staff development in career education"; and (c) "40 career interest and aptitude tests were given to high school students". A plan for product evaluation is also included in the South Portland total career education evaluation design.

DR. THOMAS SMITH

Career education activities in Covina Valley, California, have been on-going since 1971 when 12 teachers expressed interest in restructuring their

courses using career education learning packages made by each teacher in an in-service career education workshop. At present, about 50% of all Covina Valley teachers are providing some kind of career education activities in their classes. Because each teacher is encouraged to "do his/her thing" in inventing career education in the classroom, it is almost impossible to evaluate as a total career education effort. Still, the rapid growth in the number of teachers taking this approach, and their continuing interest in doing so, carry positive connotations in spite of the absence of hard product data.

As a result, Dr. Smith and his colleagues developed a student instrument called the "Career Development Status Survey", consisting of 50 items and based on the 13 basic career education concepts developed by the California Career Education Task Force. In applying this instrument, they found significant differences even among students who had been exposed to career education activities by different teachers, as well as differences between "exposed" and "non-exposed" students.

Further evaluation efforts have been made with respect to the career guidance component of career education. One example was a study using 8th Grade pupils who were exposed to a very intensive guidance effort aimed at helping them make curricular and career plans. Data from a previous year's class of 8th graders showed 50% having "no plans" when in the 9th Grade. After this effort, only 2% of these students said they had "no plans" when in the 9th Grade. Another approach they have used is one of determining the extent to which ACT Career Planning Profile results coincide with the actual kinds of course enrollments made by students once they enter community college programs.

Dr. Smith outlined eight areas he considers appropriate for use in evaluating career education including: (a) results of incremental improvement efforts of teachers to infuse a career emphasis in the teaching/learning process; (b) Student knowledge of occupations; (c) Student knowledge of available postsecondary educational preparation programs; (d) Student and teacher knowledge of basic career development principles; (e) Student knowledge of reality factors impinging on full freedom of occupational choice (e.g., geographic, financial, etc.); (f) Student skills in the

decision-making process; (g) Student knowledge of follow-up results from past classes of students; and (h) "Customer satisfaction" results from students and the various kinds of individuals responsible for implementing career education.

DR. RICHARD RUFF

Now in their fifth year of State-legislated funding for career education, the Arizona State Department of Education has developed an elaborate evaluation system for use in assessing their career education efforts. These include two 45-item student tests (one for Grades 3-7 and the other for Grades 8-12) containing items for each cell in the Arizona career education matrix. Using these *product* evaluation instruments, striking differences have been found between "career ed" as opposed to "non-career ed" students. As an example of the kinds of items used in the area of "self awareness", students are asked: (a) "How sure are you that you can do what you want to do?" and (b) "How sure are you of your occupational decisions?".

In addition to these product evaluation measures, Arizona also uses a process evaluation approach on an annual basis. Having such data available each year over a number of years has enabled them to say to members of the Arizona State Legislature such things as: "Over the last two years, we have had a 24% increase in parental involvement in career education". Dr. Ruff stressed the importance of collecting these kinds of data on an annual basis so that incremental improvement can be shown with process evaluation approaches to career education.

Arizona also uses a High School Student Follow-up Questionnaire with students one year out of high school. This instrument contains items such as: "Did your high school prepare you to (a) get a job, (b) prepare for a job", etc. Data from this follow-up instrument are being used to show the general public that career education works *right now* in Arizona. Apparently, these data have been most effective in convincing people of the worth of career education.

Arizona, like Colorado and Kansas, also has developed a test to measure teacher understanding of basic career education concepts.

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Over the last several years, career education curriculum units have been developed by Arizona classroom teachers, validated by career education specialists in the Arizona State Department of Education, and then distributed to teachers throughout the State. Validation data, for each such unit, now includes answers to questions such as: (a) To what extent do pupils attain the unit objectives; (b) Do teachers enjoy using this unit?; (c) Do pupils enjoy the unit?; and (d) What costs are involved in using the unit?. If one were looking for a single State Department of Education where career education evaluation has been systematically and carefully studied, it would be hard to find a better example than the Arizona State Department of Education.

DR. PHILLIP SPIETH

The Dade County (Miami, Florida) career education effort operates with a number of components developed at the county office level. Each school is free to pick those components (if any) that they want to use in their career education activities. Thus, each school has, in a sense, a unique program. Partly for this reason, evaluation plans for career education call for selecting both experimental and control pupils from within the same school--not in comparing pupils in one school with another.

Considerable attention has been devoted, especially at the elementary school level, to assessing the effects of a career education emphasis on improvement in academic achievement of pupils. To do this, they have devised a complicated system for classifying pupils into "clusters" --(e.g., white, low ability, etc.)--that will allow them to determine, for any pupil by the end of the school year, whether that pupil is doing (a) better than expected, (b) about as expected, or (c) worse than expected.

Perhaps because of the wide variability in specific career education practices adopted by the various schools in the county, mixed results have been obtained in evaluations of career education. In some schools, pupils appear to have gained significantly in academic achievement, while in other schools they have not. The only apparently consistent finding that appears to hold up, county-wide, is that pupils exposed to a career

education approach come to school more frequently than do those who are not exposed to career education. (In one school comparison, they also found that, with a career education emphasis introduced, *teacher* attendance as well as pupil attendance increased.) Another possible reason for the observed variability of results is that, during the 1974-75 school year, the experimental treatment period was only six months. For 1975-76, the period ~~is~~ intended to cover the entire school year.

SUMMARY OBSERVATIONS OF CURRENT PRACTICES

The 12 career education evaluation "practitioners", whose activities have been summarized in this section, obviously vary greatly both in their approaches to evaluation and in their concepts of career education. The mixture between an educational reform and an education in careers emphasis is very obvious. So, too, is the mixture between process and product evaluation. Those who appear to have adopted a concept of educational reform as the basic goal of career education seem to tend much more toward initial use of process evaluation measures, with product evaluation measures coming along later. On the other hand, those whose perceptions of career education appear to center more directly on career development of individual students seem to go much more directly toward a product evaluation approach.

In all cases, these 12 examples have, hopefully, illustrated that, in spite of the problems outlined in the first portion of this monograph, career education evaluation attempts are currently being carried out in areas of the country that cover every major geographic region--from coast to coast and from North to South. The problems involved in the evaluation process have not stopped those convinced of the need to provide data concerning the worth of career education.

USE OF OE EDUCATION LEARNER OUTCOMES IN EVALUATION EFFORTS

Both the problems involved in and the need for process evaluation of career education were stressed in the first portion of this monograph. The emphasis on product

evaluation found in this section is in no way intended to demean nor to detract from the absolute necessity for process evaluation efforts. Rather, it is more correctly intended to emphasize what is regarded as an absolute necessity if career education is to continue to be pictured as a concept rather than as a program. With the active involvement of many kinds of persons from many segments of the total community in career education, it is essential that those concerned with evaluation of career education concentrate significant attention, at this period in the short history of this evolving concept, on assessing student benefits to be derived from a comprehensive career education effort. Such an approach, while obviously ignoring the differential contributions made by various "actors" in the effort, is essential for answering the question of whether or not career education can produce some demonstrated benefits for students. If this can be done, career education can, in future years, zero in on more sophisticated and more finely-tuned evaluation procedures. Unless this is done, it is possible that career education will not have a long future.

In the OE policy paper, *An Introduction To Career Education*, nine learner outcomes, stated essentially in product evaluation form, are listed. This entire list is preceded, in the OE policy paper, by an introductory phrase which says:

"Career education seeks to produce individuals who, when they leave school (at any age or at any level) are:"

After a listing of the nine learner outcomes, the following paragraph appears in the OE policy paper:

"It is important to note that these learner goals are intended to apply to persons leaving the formal educational system for the world of work. They are not intended to be applicable whenever the person leaves a particular school. For some persons, then, these goals become applicable when they leave the secondary school. For others, it will be when they have left post-high school occupational education programs. For still others, these goals need not be applied, in toto, until they have left a college or university setting.

"Thus, the applicability of these learner outcome goals will vary from individual to individual as well as from one level of education to another. This is consistent with the developmental nature, and the basic assumption of individual differences, inherent in the concept of career education."

Given both the predicated phrase and the paragraph that follows the listing of the nine OE learner outcome goals, both sets of consultants at the two "mini-conferences" concerned with evaluation of career education were asked to comment on the suitability of the goal and our current readiness for using it in the product evaluation of career education. Valuable recommendations (sometimes with consensus but often without) were received from individual members of both "mini-conferences". Participants in the second of these "mini-conferences", in addition to commenting on the applicability of the nine learner outcome goals, suggested revisions in several of them (over and beyond revisions that had already been made by the Director, Office of Career Education). Moreover, they suggested one additional learner outcome goal to be added to the original list of nine.

In this section, then, each of the now *ten* OE learner goals, *in the form they are now intended to be stated*, will be delineated, and consultant recommendations concerning our readiness for using each goal will be summarized.

GOAL 1: COMPETENT IN THE BASIC ACADEMIC SKILLS REQUIRED FOR ADAPTABILITY IN OUR RAPIDLY CHANGING SOCIETY

A clear majority, but not all, of the consultants considered this to be a reasonable learner outcome goal for career education. In the view of OE's Office of Career Education, this is the single most important learner outcome goal for career education, as a vehicle for educational reform. A proposal for educational reform that ignores this learner outcome goal cannot, in the Office of Career Education's (OCE's) opinion, be justified at all.

While most of the "mini-conference" participants agreed on the appropriateness of this learner outcome goal, they disagreed on the kind of measures appropriate

for use in measuring progress toward this goal. In the first of these two "mini-conferences", consensus seemed to exist that norm-referenced tests are what the general public wants and, thus, what should be used. A significant minority of these participants, however, argued strongly for use of criterion-referenced achievement tests. General agreement was present that norm-referenced achievement tests have serious limitations and probably will be replaced with other approaches to measuring academic achievement, but most felt them to be more appropriate than criterion-referenced tests at the present time.

In the second of these "mini-conferences" on evaluation of career education, most of the discussion centered around the potential some of the newer approaches to measuring *functional literacy* have for assessing this learner outcome goal. It was pointed out that several significant beginnings have been made in developing and in validating functional literacy measures. Most commonly mentioned were the functional literacy measures developed as part of the National Assessment of Educational Progress project of the Education Commission of the States. The recently much-publicized APL tests of functional literacy from the University of Texas were also discussed as promising. So, too, was a recent monograph by Dr. Thomas Sticht of HUMRO which contains a good working definition of functional literacy. Finally, the NIE Model IV (Mountain Plains) project was mentioned as one now developing functional literacy measures. A general consensus seemed to exist, in this second "mini-conference" that, while standardized norm-referenced achievement tests may be suitable for use in assessing this learner outcome goal for elementary school pupils, a measure of functional literacy would be preferable at the junior and senior high school levels.

In the view of OE's Office of Career Education, the use of norm-referenced achievement tests are appropriate, at this point in time, for use at both the elementary and secondary school levels in assessing this learner outcome goal. In addition, at the secondary school level, use of some kind of functional literacy measure should be encouraged. Use of functional literacy measures, as a replacement for norm-referenced achievement tests at the secondary school level, will become possible only when academic teachers at that level accept such measures as

valid indicators of what they are teaching. It appears that this will not happen in the immediate future.

GOAL 2: EQUIPPED WITH GOOD WORK HABITS

Both sets of "mini-conference" participants agreed that this learner outcome goal is both appropriate and measurable. However, disagreement and controversy was found on many of the technical issues surrounding its use. For example, some participants agreed that it is feasible to consider measuring *knowledge* of good work habits, but felt that they could not be measured *behaviorally*. Others contended that behavioral measures of work habits are available. Some questioned the use of teacher checklists as indicators of pupil work habits, but others pointed out that, when such checklists are used with Kindergarten pupils, the results correlate positively with reading score gains in Grade 1.

One person emphasized the fact that, with current restrictions existing on using any form of attitudinal measure as part of the pupil's grade, the potential for marking students on "work habits" may be questioned severely in some quarters.

Another very thorny problem was raised by one participant who asked what differences exist between what is known as "work habits" and the "work ethic". General agreement seemed to be present that these two terms, while not unrelated, should be kept as separate as possible in developing assessment measures. This, of course, can be most easily and clearly done if measures of "work habits" are developed in behavioral terms and measures of the "work ethic" are developed in attitudinal terms. (Note: The problem of distinguishing between these two terms is a conceptual one that could be debated at some length. It is not considered appropriate to include such a debate as part of this monograph.)

In spite of these several areas of disagreement and controversy, a clear consensus was present, among both sets of "mini-conference" participants, that this learner outcome goal is an appropriate one for use and that it can be measured in a satisfactory manner.

GOAL 3: EQUIPPED WITH A PERSONALLY MEANINGFUL SET OF
WORK VALUES THAT FOSTER IN THEM A DESIRE TO WORK

(Note: Revised from earlier OE statement)

This learner outcome goal, as originally stated in the OE policy paper on career education, had included the phrase "capable of choosing". Participants in both "mini-conferences" agreed that, at best, this is a phrase difficult to define in measurable terms. Several felt this phrase to be a meaningless one.

It was suggested that, in evaluating the degree to which this goal has been attained, evaluators seek measurements at the following three levels: (a) the number of kinds of work values of which the student is aware; (b) the definiteness with which the student has decided which work values are important to him/her; and (c) the behaviors the student has taken that demonstrate possession of one or more of his/her work values. Consensus seemed to be present that, at each of these three levels, suitable measures could be constructed. One seminar participant suggested that, perhaps, a simple process measure such as the number of teachers who are trying to reach this objective might be sufficient for use, but this suggestion was not apparently accepted by most of the participants.

Several "mini-conference" participants reported they are already collecting data related to this learner outcome goal. Joe Gastright reported having data for 3rd and 6th graders around the question "Why do people work?" that produced dramatic results. Janet Shelper reported both 1st and 6th grade pupils in Sioux Falls seemed to pick up the concept of work values quickly and easily. Dick Ruff reported having data showing that elementary school pupils exposed to career education spend more time on homework than do non-career ed pupils (self report data).

It may well be that, for this learner outcome goal, two different kinds of evaluation measures may be required. As one participant pointed out, one can measure whether or not pupils possess work values. One can also measure pupil desire to work. However, one cannot measure directly the *relationship* between the two. This seems to be a very valid point and well worth consideration.

GOAL 4: EQUIPPED WITH CAREER DECISIONMAKING SKILLS,
JOB-HUNTING SKILLS, AND JOB-GETTING SKILLS

There was almost unanimous consensus, among participants in both of the "mini-conferences", that this learner outcome goal could be assessed. Consensus seemed particularly strong if the measures used consist of instruments assessing *knowledge* of such skills rather than behavioral demonstrations of their uses. There also seemed to be consensus that, even if direct behavioral assessments based on routine actions could not be assessed, this learner outcome goal lends itself very well to assessment through simulation procedures which are behaviorally oriented. Both Dick Ruff and Elvis Arterbury reported success in measuring this goal through knowledge tests.

Other possible instruments for use in measuring this learner outcome goal were suggested by several participants. For example, Houghton-Mifflin's *Assessment of Career Development* has a section on "work skills" that could be useful here. Dr. Robert Campbell, Center for Vocational Education, Ohio State University, was reported to have a "job-coping skills test" which would be suitable for assessing the variable of "job-holding" skills. Both "job-seeking" and "job-getting" tests were reported to be available from the Center for Research in Vocational Education, the University of Wisconsin. Several participants recommended examining measures in all of these areas now available from the National Assessment of Educational Progress project conducted by the Education Commission of the States.

GOAL 5: EQUIPPED WITH JOB SPECIFIC OCCUPATIONAL SKILLS
AND INTERPERSONAL SKILLS AT A LEVEL THAT WILL ALLOW THEM
TO GAIN ENTRY INTO AND ATTAIN A DEGREE OF SUCCESS IN THE
OCCUPATIONAL SOCIETY (Note: Revised from earlier OE
statement)

The original OE statement of this goal, as it appears in the OE policy paper, contained a typographical error in that the word "personal" was used rather than the word "interpersonal" which was intended. In addition to correcting this misprint, participants suggested substituting the phrase "job specific occupational" for the

word "vocational" so that clear and unambiguous reference is made to the world of paid employment--(i.e., the generic term "vocational" can be interpreted to include unpaid, as well as paid, work). With these two changes, participants in both "mini-conferences" agreed that this learner outcome goal is suitable for use and capable of being measured.

The prime reservation, insofar as the measurement problem is concerned, was expressed in terms of pointing out that an accurate assessment of "job specific occupational skills" would require literally thousands of specific measures--both paper and pencil tests and performance measures. Others pointed out that, if one limits his/her thinking to the job entry level, the problem may not be as complicated as it appears to be at first glance.

One participant suggested that the term "interpersonal skills" be removed from this learner outcome goal and be made a part of Goal 4. No strong consensus appeared to be present on this point. There *did* seem to be consensus that the term "interpersonal skills" should be retained somewhere among the learner outcome goals.

Participants in the first of these two "mini-conferences" agreed that student follow-up data would constitute appropriate data for use in assessing this learner outcome goal. However, participants in the other "mini-conference" disagreed with this suggestion. OE's Office of Career Education believes that, while follow-up data constitute one form of acceptable data for this learner outcome goal, they will not be sufficient in and of themselves.

GOAL 6: EQUIPPED WITH A DEGREE OF SELF-UNDERSTANDING AND
UNDERSTANDING OF EDUCATIONAL-VOCATIONAL OPPORTUNITIES
SUFFICIENT FOR MAKING SOUND CAREER DECISIONS
(Note: Revised from earlier OE statement)

As originally written in the OE policy paper, this learner goal assumed a direct causal relationship between student self-understandings, understandings of educational-vocational opportunities, and actual career decisions made by students. Participants seemed to agree that the learner outcome goal would be more susceptible to accurate measure if it concentrated on possession of skills required for making sound career decisions without carrying any

necessary implications for making judgments regarding the soundness of those career decisions any given student finally makes. That is, the emphasis should be on whether the decision is "reasoned", not on whether it is "reasonable" (as judged by others). The revised goal statement appearing above appears to meet this concern.

One participant suggested that the term "career planning skills" could be substituted for the longer phrase used in this learner outcome goal and that, if this is done, that term could be added to others already present in Learner Outcome Goal 4, thus making Learner Outcome Goal 6 unnecessary. There did not seem to be any strong agreement with this position. Thus, that recommendation was not followed.

GOAL 7: AWARE OF MEANS AVAILABLE TO THEM FOR CONTINUING AND RECURRENT EDUCATION (Note: Revised from earlier OE statement)

Participants suggested eliminating the phrase "once they have left the formal system of schooling" from this goal statement in that it is unnecessary, given the predicatory statement that precedes the list of learner outcome goals. This seemed to be a good suggestion and it was followed.

Several participants pointed out the necessity for collecting data, with reference to this learner outcome goal, primarily in terms of the immediate future faced by students as they are about to exit from the formal school setting. That is, there will be no good way of assessing the degree to which they will be aware of such means several years after having left. Others disagreed with this suggestion and recommended that, if "means" are thought of as "skills", they can be assessed through more kinds of measures than simple tests of information.

No participant, in either "mini-conference", indicated this learner outcome goal to be inappropriate nor incapable of measurement.

GOAL 8: EITHER PLACED OR ACTIVELY SEEKING PLACEMENT IN A
PAID OCCUPATION, IN FURTHER EDUCATION, OR IN A VOCATION
CONSISTENT WITH THEIR CURRENT CAREER DECISIONS

(Note: Revised from earlier OE statement)

General consensus, at least among the second group of "mini-conference" participants, appeared to be present that, as originally written, there was no way in which any student could fail to meet it--thus making the goal, as a criterion measure, operationally useless. Others pointed out that, unless the words "actively seeking" were inserted into the goal statement, *too many* students would be sure not to meet it! The revised learner goal statement, as it appears above, represents a compromise between these two expressed concerns.

Participants in the first of these two "mini-conferences" agreed that student follow-up studies would constitute an appropriate measurement approach to use in assessing this learner outcome goal. Participants in the second "mini-conference" did not disagree with this recommendation.

GOAL 9: ACTIVELY SEEKING TO FIND MEANING AND MEANING-
FULNESS THROUGH WORK IN PRODUCTIVE USE OF LEISURE TIME

(Note: Revised from earlier OE statement)

As originally written in the OE policy paper, participants in the first of the two "mini-conferences" agreed that the goal was incapable of being measured. Prior to the second of these "mini-conferences", the Director of the Office of Career Education in OE revised the goal statement as it appears above. With this revised goal statement, participants in the second "mini-conference" seemed to agree that the goal was both reasonable and capable of being measured.

GOAL 10: AWARE OF MEANS AVAILABLE TO THEMSELVES FOR
CHANGING CAREER OPTIONS--OF SOCIETAL AND PERSONAL CON-
STRAINTS IMPINGING ON CAREER ALTERNATIVES (Note: This
is a new goal and does not appear in the OE policy paper)

The suggestion for addition of this new learner outcome goal came from Dr. Anita Mitchell, a participant in the

second of these "mini-conferences". Dr. Mitchell pointed out that, as written, the set of OE learner outcome goals are directed primarily toward helping individuals adjust to society rather than showing them ways of adjusting society to themselves. Other participants in this "mini-conference" seemed to be in strong agreement with Dr. Mitchell on this point. So, too, was the Director of the Office of Career Education.

The topic of how to measure this learner outcome goal was not discussed. It would not seem unreasonable to assume that it could be measured, at least on a knowledge of information type instrument. As with several of the others, it would be difficult to measure in behavioral terms unless broken down into smaller components.

In summary, it can be seen that, of the original nine learner outcome goals found in the OE policy paper, six have been revised as a result of the consultative assistance provided by these two sets of "mini-conference" participants. In addition, one new goal has been added to the list making ten in all. Those persons currently using the OE policy paper, *An Introduction To Career Education*, as a source of learner outcome goals, are encouraged to substitute the revised set as presented here.

CONCLUDING REMARKS

Problems associated with evaluation of career education are complicated by the developmental nature of the career education concept, by the newness of the concept and its introduction in the midst of a strong call for accountability in all of education, and, most of all, by the fact that career education seeks to remain a concept to be infused into all existing educational programs rather than a new and separate program specialty in education.

In spite of these difficulties, systematic and conscientious attempts at evaluation of career education are currently being conducted in communities in all major geographic sections of the United States. While wide variation obviously exists in both the methodologies being employed and in the ways in which career education is being conceptualized, the need and the desire to

engage in careful and systematic evaluation procedures is evident. So, too, are initial signs pertaining to the efficacy of career education.

Both process and product evaluation are needed in career education. Process evaluation will, for some time, be essential in assessing the degree to which career education is, in fact, serving as a vehicle for reform of the educational system. Product evaluation, based on a clearly defined set of learner outcome goals, will be essential in assessing the extent to which the career education effort is providing direct benefits to students. The revised OE list of "learner outcome goals" for use in evaluating career education efforts appears to be acceptable to those experts in educational evaluation who participated in the two OE "mini-conferences" on which this monograph is based. Further revisions will undoubtedly come in the years ahead.

The need for careful attention to the problems and the potential inherent in evaluating career education efforts is obvious. That need is great at the present time and it is sure to increase in the future. Career education, no matter how great the conceptual and operational problems are, cannot avoid the necessity for careful and conscientious evaluation efforts. It is hoped that the contents of this monograph will encourage the further development and rapid proliferation of sound evaluation efforts among all those who profess to be engaged in career education.

APPENDIX A

List of Mini-Conference Participants Evaluation of Career Education Conference #5 October 6-7, 1975

Mr. Joe Gastright Program Evaluation Branch Cincinnati Public Schools Cincinnati, Ohio	Dr. Ellen Meister Madison Public Schools Madison, Wisconsin
Mr. Howard Heitzeg Supervisor of Research and Evaluation Waterford, Michigan	Dr. Thomas Smith Director, Research & PPS Covina Valley Schools Covina, California
Dr. Carroll Curtis Director, RCU Pennsylvania State Department of Education Harrisburg, Pennsylvania	Dr. Elvis Arterbury Partners in Career Education Arlington, Texas
Dr. Gary Jarnor Regional Career Education Project Director Colby, Kansas	Ms. Janet Shelver Career Education Consultant Sioux Falls Public Schools Sioux Falls, South Dakota
Dr. Richard Ruff Planning and Evaluation Arizona State Department of Education Phoenix, Arizona	Dr. Arthur Berry Coordinator of Vocational Education University of Maine Gorham, Maine
Dr. Frank Rapley Assistant Superintendent of Instruction Louisville Public Schools Louisville, Kentucky	Dr. Phillip Spieth Director, Evaluation Studies Dade County Public Schools Miami, Florida

APPENDIX B

List of Mini-Conference Participants Validation Conference on Evaluation of Career Education Conference #19 March 2, 1976

Dr. Brandon Smith
RCU Director
Minnesota State Department
of Education

Dr. Anita Mitchell
American Institute of
Research
Palo Alto, California
(President, AMEG)

Dr. Lois-ellin Datta
Assistant Director
Education and Work Group
National Institute of
Education

Dr. Alice Scates
Bureau of Planning and
Evaluation
U.S. Office of Education

Dr. Conrad Katzenmeyer
Wisconsin Research and
Development Center for
Cognitive Learning
University of Wisconsin
(President, CEDAR)